

# IDENTIFIKASI DAN ANALISIS RISIKO KECELAKAAN KERJA MENGUNAKAN METODE FMEA, TOPSIS DAN FTA (Studi Kasus: PT. Kunango Jantan)

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## **ABSTRAK**

Kecelakaan kerja menimbulkan kerugian bagi pekerja, perusahaan, masyarakat, dan lingkungan alam. PT. Kunango Jantan merupakan perusahaan manufaktur yang memproduksi tiang listrik beton. Ditemukan 64 risiko kecelakaan kerja yang dapat menimpa pekerja pada saat pembuatan tiang listrik beton. Berdasarkan perhitungan metode FMEA, TOPSIS dan diagram pareto diperoleh 5 risiko kecelakaan kerja yang harus segera diatasi antara lain terjatuh dari ketinggian saat mendempul, berkontak dengan suhu panas pada beton, terkena uap panas pada saat proses penguapan, terjepit pintu mesin, dan berkontak dengan suhu panas pada *moulding*. Adapun risiko kecelakaan disebabkan oleh faktor peralatan, lingkungan, metode kerja dan tenaga kerja. Usulan perbaikan yang diberikan untuk mencegah terjadinya kecelakaan antara lain meningkatkan pengawasan artinya perusahaan harus menambah staff ahli K3, memperbaiki prosedur kerja pada proses penguapan dan *finishing*, memberi penutup bak penguapan, dan memaksimalkan penggunaan APD.

**Kata Kunci:** Keselamatan Kerja, Manajemen Risiko, Metode FMEA, Metode FTA, Metode TOPSIS

UIN SUSKA RIAU

**IDENTIFICATION AND OCCUPATIONAL ACCIDENT RISK  
ANALYSIS USING METHODS FMEA, TOPSIS AND FTA  
(Case Study : PT. Kunango Jantan)**

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***ABSTRACT***

*Occupational accidents cause harm to workers, corporations, peoples, and environment. The Prevention can be done by identifying the risks of work accidents that can occur in the production process. PT. Kunango Jantan is a manufacturing company that produced concrete electric poles. There were 64 occupational injury risks that could damaged workers at the time of manufacture of concrete electrical poles. Based on the calculation of FMEA method, TOPSIS and pareto diagram obtained 5 occupational accidents risks that must be addressed, among others, falled from the height when caulking, contacted with the hot temperature on the concrete, exposed to steam during the evaporation process, pinched the door of the machine, and contacted with the hot temperature On molding. The risk of accidents caused by equipment factors, environment, work methods and workers. Proposed improvements to prevent accidents include increased supervision, which means the company must add an staff of HSE, improve working procedures on the evaporation and finishing process, provide evaporation basin cover, and maximize the use of PPE.*

**Keywords:** *Methods FMEA, Methods FTA, Methods TOPSIS, Risk Management, Work Safety*